IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with <u>underlining</u> and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1-13 and ADD new claims 14-17 in accordance with the following:

1. (CURRENTLY AMENDED) An exposure method which processes an optical proximity correction to ~~an exposure data having a plurality of~~ exposure ~~patterns~~ <u>pattern data</u> and exposes a substrate in accordance with the ~~corrected exposure~~ <u>bitmapped pattern</u> data, ~~the method~~ comprising:

~~a correction processing step of~~ converting ~~an~~ <u>the</u> exposure pattern <u>data</u> ~~to be corrected, which is subject to an optical proximity effect, of the plurality of exposure patterns~~, into a~~ minus objective pattern <u>data</u> and a~~ minus pattern <u>data, wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective data</u> ~~to be deleted from the minus objective pattern, to generate the corrected exposure data~~;

~~a bitmap processing step of~~ <u>generating the bitmapped pattern data by</u> deleting the minus pattern <u>data</u> from the minus objective pattern <u>data</u> ~~of the corrected exposure data, to bitmap the corrected exposure pattern~~; and

~~an exposure step of~~ exposing the substrate in accordance with the bitmapped ~~corrected exposure~~ pattern <u>data</u>.

2. (CURRENTLY AMENDED) The exposure method according to claim 1, wherein in the case of the optical proximity correction for preventing corners of ~~the exposure~~ <u>an exposed</u> pattern <u>on the substrate</u> from being rounded, the exposure pattern <u>data</u> ~~to be corrected~~ is converted~~, in the correction processing step,~~ into the minus objective pattern <u>data</u> which is an enlarged one of the exposure pattern <u>data</u> ~~to be corrected~~ and into the minus pattern <u>data</u> positioned ~~at center~~ <u>on</u> sides of <u>the area corresponding to</u> the minus objective pattern <u>data</u>.

3. (CURRENTLY AMENDED) The exposure method according to claim 1, wherein

in the case of the optical proximity correction for preventing an enlargement at a position confronting an adjacent other pattern in a linear ~~exposure~~ exposed pattern on the substrate, the exposure pattern data ~~to be corrected~~ is converted, ~~in the correction processing step,~~ into the minus objective pattern data consisting of the exposure ~~patterns~~ pattern data, ~~to be corrected~~ and into the minus pattern data at a ~~the~~ position confronting the adjacent other pattern.

4. (CURRENTLY AMENDED) ~~The~~ An exposure method ~~according to claim 1, wherein~~ which processes an optical proximity correction to exposure pattern data and exposes a substrate in accordance with bitmapped pattern data, the method comprising:

~~in the correction processing step, if the number of patterns after conversion is smaller in a second optical proximity correction processing for converting the exposure pattern to be corrected into the minus objective pattern and the minus pattern, than in a first optical proximity correction processing for converting the exposure pattern to be corrected into a plurality of division exposure patterns obtained by dividing the corrected exposure patterns after the optical proximity correction, then the second optical proximity correction processing is carried out, and wherein if the number of patterns after conversion is greater in the second optical proximity correction processing than in the first optical proximity correction processing, then the first optical proximity correction processing is carried out~~

an optional first step of correcting the exposure pattern data, and converting the corrected exposure pattern data into plural divided exposure pattern data;

an optional second step of converting the exposure pattern data into minus objective pattern data and minus pattern data, wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective pattern data,

wherein if a number of the divided exposure pattern data is expected to be less than that of the minus objective pattern data and the minus pattern data, said optional first step is processed, and wherein if a number of the minus objective pattern data and the minus pattern data is expected to be less than that of the divided exposure pattern data, said optional second step is processed;

a bitmap processing step of generating the bitmapped pattern data by deleting the minus pattern data from a combination of the divided exposure pattern data and the minus objective pattern data; and

an exposure step of exposing the substrate in accordance with the bitmapped pattern data.

5. (CURRENTLY AMENDED) An exposure system which processes an optical proximity correction to ~~an exposure data having a plurality of~~ exposure ~~patterns~~ pattern data, and exposes a substrate in accordance with ~~the corrected exposure~~ bitmapped pattern data, the system comprising:

a correction processing unit which converts ~~an~~ the exposure pattern data ~~to be corrected which is subject to an optical proximity effect, of the plurality of exposure patterns,~~ into a minus objective pattern data and ~~a~~ minus pattern data, wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective pattern data ~~to be deleted from the minus objective pattern, to thereby the generate corrected exposure data~~;

a bitmap processing unit which ~~deletes~~ generates the bitmapped pattern data by deleting the minus pattern data from the minus objective pattern data ~~of the corrected exposure data to bitmap the corrected exposure pattern~~; and

an exposure unit ~~for exposing~~ which exposes the substrate in accordance with the bitmapped ~~correction exposure~~ pattern data.

6. (CURRENTLY AMENDED) The exposure system according to claim 5, wherein

in the case of the optical proximity correction for preventing corners of ~~the exposure~~ an exposed pattern on the substrate from being rounded, the correction processing unit converts the exposure pattern data ~~to be corrected~~, into the minus objective pattern data which is an enlarged one of the exposure pattern data, ~~to be corrected~~ and into the minus pattern data positioned ~~at center~~ on sides of the area corresponding to the minus objective pattern data.

7. (CURRENTLY AMENDED) The exposure system according to claim 5, wherein

in the case of the optical proximity correction for preventing an enlargement at a position confronting an adjacent other pattern in a linear ~~exposure~~ exposed pattern on the substrate, the correction processing unit converts the exposure pattern data ~~to be corrected~~, into the minus objective pattern data consisting of the exposure pattern data ~~to be corrected~~ and into the minus pattern data at a position confronting the adjacent other pattern.

8. (CURRENTLY AMENDED) ~~The~~ An exposure system ~~according to claim 5, wherein~~ which processes an optical proximity correction to exposure pattern data and exposes a substrate in accordance with bitmapped pattern data, the system comprising:

~~the correction processing unit, if the number of patterns after conversion is smaller in the second optical proximity correction processing for converting the exposure pattern to be corrected into the minus objective pattern and the minus pattern, than in the first optical proximity correction processing for correcting the exposure pattern to be corrected into the plurality of division exposure patterns obtained by dividing the correction exposure patterns after the optical proximity correction, carries out the second optical proximity correction processing; and the correction processing unit, if the number of patterns after conversion is greater in the second optical proximity correction processing than in the first optical proximity correction processing, carrying out the first optical proximity correction processing~~

an optional first correction processing unit which corrects the exposure pattern data, and converts the corrected exposure pattern data into plural divided exposure pattern data;

an optional second correction processing unit which converts the exposure pattern data into minus objective pattern data and minus pattern data, wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective pattern data,

wherein if a number of the divided exposure pattern data is expected to be less than that of the minus objective pattern data and the minus pattern data, said optional first correction processing unit processes the correction and the conversion, and wherein if a number of the minus objective pattern data and the minus pattern data is expected to be less than that of the divided exposure pattern data, said optional second correction processing unit processes the conversion;

a bitmap processing unit which generates the bitmapped pattern data by deleting the minus pattern data from a combination of the divided exposure pattern data and the minus objective pattern data; and

an exposure unit which exposes the substrate in accordance with the bitmapped pattern data.

9. (CURRENTLY AMENDED) An exposure data processing apparatus which processes an optical proximity correction to ~~an exposure data having a plurality of~~ exposure ~~patterns~~ pattern data, to generate ~~a~~ corrected exposure pattern data, the apparatus comprising:

a correction processing unit ~~for converting an~~ which converts the exposure pattern data ~~to be corrected, which is subject to an optical proximity effect, of the plurality of exposure patterns,~~ into a minus objective pattern data and a minus pattern data to be deleted from the minus objective pattern data, to generate the corrected exposure pattern data, wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective pattern data.

10. (CURRENTLY AMENDED) The exposure data processing apparatus according to claim 9, wherein in the case of the optical proximity correction for preventing corners of ~~the exposure~~ an exposed pattern from being rounded, the correction processing unit converts the exposure pattern data ~~to be corrected~~ into the minus objective pattern data which is an enlarged one of the exposure pattern data ~~to be corrected~~ and into the minus pattern data positioned ~~at center~~ on sides of the area corresponding to the minus objective pattern data.

11. (CURRENTLY AMENDED) The exposure data processing apparatus according to claim 9, wherein in the case of the optical proximity correction for preventing an enlargement at a position confronting an adjacent other pattern in a linear ~~exposure~~ exposed pattern, the correction processing unit converts the exposure pattern data ~~to be corrected~~ into the minus objective pattern data consisting of the exposure pattern data ~~to be corrected~~ and into the minus pattern data at the position confronting the adjacent other pattern.

12. (CURRENTLY AMENDED) ~~The~~ An exposure data processing apparatus ~~according to claim 9, wherein~~ which processes an optical proximity correction to exposure pattern data, to generate corrected exposure pattern data, the apparatus comprising:

~~the correction processing unit, if the number of patterns after conversion is smaller in a second optical proximity correction processing for converting the exposure pattern to be corrected into the minus objective pattern and the minus pattern, than in a first optical proximity correction processing for converting the exposure pattern to be corrected into a plurality of division exposure patterns obtained by dividing the correction exposure patterns after the optical proximity correction, carries out the second optical proximity correction processing; and the correction processing unit, if the number of patterns after conversion is greater in the second optical proximity correction processing than in the first optical proximity correction processing,~~

~~carries out the first optical proximity correction processing~~

an optional first correction processing unit which corrects the exposure pattern data, and converts the corrected exposure pattern data into plural divided exposure pattern data;

an optional second correction processing unit which converts the exposure pattern data into minus objective pattern data and minus pattern data to be deleted from the minus objective pattern data, to generate the corrected exposure pattern data, wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective pattern data,

wherein if a number of the divided exposure pattern data is expected to be less than that of the minus objective pattern data and the minus pattern data, said optional first correction processing unit processes the correction and the conversion, and wherein if a number of the minus objective pattern data and the minus pattern data is expected to be less than that of the divided exposure pattern data, said optional second correction processing unit processes the conversion.

13. (CURRENTLY AMENDED) An exposure apparatus for exposing a substrate ~~to exposure patterns,~~ in accordance with ~~exposure data,~~ bitmapped pattern data comprising:

a bitmap processing unit which inputs ~~a corrected exposure data obtained by converting an exposure pattern to be corrected which is subject to an optical proximity effect, into a~~ minus objective pattern data and a minus pattern data to be deleted from the minus objective pattern data, wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective pattern data, and generates the bitmapped pattern data by deleting ~~deletes~~ the minus pattern data from the minus objective pattern data ~~to bitmap a corrected exposure pattern~~; and

an exposure unit ~~for exposing~~ which exposes the substrate in accordance with the bitmapped ~~corrected exposure~~ pattern data.

14. (NEW) An exposure data processing method which processes an optical proximity correction to exposure pattern data to generate corrected exposure pattern data, the method comprising:

converting the exposure pattern data into minus objective pattern data and minus pattern data to be deleted from the minus objective pattern data, to generate the corrected exposure pattern data,

wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective pattern data.

15. (NEW) The exposure data processing method according to claim 14, wherein in the case of the optical proximity correction for preventing corners of an exposed pattern from being rounded, the exposure pattern data is converted into the minus objective pattern data which is an enlarged one of the exposure pattern data, and into the minus pattern data positioned on sides of the area corresponding to the minus objective pattern data.

16. (NEW) The exposure data processing method according to claim 14, wherein in the case of the optical proximity correction for preventing an enlargement at a position confronting an adjacent other pattern in a linear exposed pattern, the exposure pattern data is converted into the minus objective pattern data consisting of the exposure pattern data and into the minus pattern data at the position confronting the adjacent other pattern.

17. (NEW) An exposure data processing method which processes an optical proximity correction to exposure pattern data and exposes a substrate in accordance with bitmapped pattern data, the method comprising:

correcting the exposure pattern data, and converting the corrected exposure pattern data into plural divided exposure pattern data if a number of the divided exposure pattern data is expected to be less than that of the minus objective pattern data and the minus pattern data;

converting the exposure pattern data into minus objective pattern data and minus pattern data to be deleted from the minus objective pattern data, wherein an area corresponding to the minus pattern data is included in an area corresponding to the minus objective pattern data if a number of the minus objective pattern data and the minus pattern data is expected to be less than that of the divided exposure pattern data.